

## عنوان مقاله:

The effect of silver nanoparticles of aqueous extract of *Artemisia dracunculus* on the prevention of gastric ulcer induced by ethanol in rats

## محل انتشار:

دوفصلنامه بیوتکنولوژی گیاهی، دوره 6، شماره 1 (سال: 1403)

تعداد صفحات اصل مقاله: 0

## نویسندگان:

Navid Etemadi - *DVM Graduate, Faculty of Veterinary Medicine, Urmia University, Urmia, Iran*

Seyyed Meysam Abtahi Froushani - *Department of Microbiology, Faculty of veterinary Medicine, Urmia University, Urmia, Iran*

Akram Zangeneh - *Biotechnology and Medicinal plants Research Center Ilam University of Medical Sciences, Ilam, Iran*

Mohammad Mehdi Zangeneh - *Biotechnology and Medicinal plants Research Center Ilam University of Medical Sciences, Ilam, Iran*

Ali Pirnejad-Talatapeh - *Central Laboratory, Faculty of Veterinary Medicine, Urmia University, Urmia, Iran*

Ghobad Abangah - *School of Medicine, Shahid Mostafa Khomaeini Hospital, Ilam University of Medical Sciences, Ilam, Iran*

Siavosh Kaki Sahne - *DVM Student, Faculty of Veterinary Medicine, Urmia University, Urmia, Iran*

Shahin Ehteshamfar - *Department of Internal Medicine and Clinical Pathology, Faculty of Veterinary Medicine, Urmia University, Urmia, Iran*

## خلاصه مقاله:

Objective: One of the common diseases among the communities is stomach ulcer. Common treatments for this disease include drugs that reduce acid secretion, which, while effective, have side effects. The use of medicinal plants as an aid in the treatment of this disease is considered. One of the application fields of nanobiotechnology is the use of silver nanoparticles (Nanosilver particles) for a new solution in the treatment of digestive diseases. This study was conducted to determine the effect of silver nanoparticles combined with *Artemisia dracunculus* extract for the prevention of ethanol-induced gastric ulcer. Method: To conduct this study, ۲۸ rats (۲۲۰-۲۵۰ grams) were used in ۴ experimental groups. The experimental groups included the saline group, the groups receiving aqueous *Artemisia dracunculus* extract with a dose of ۱۰۰۰ mg/kg and silver nanoparticles of *Artemisia dracunculus* aqueous extract with a dose of ۰.۵ mg/kg, the omeprazole group with a dose of ۲۰ mg/kg orally, and the negative control group. ۱۲ days after the treatment, gastric ulcer was induced by feeding half a cc of pure ethanol to each animal. After ۴ hours, the animals were anesthetized, blood was drawn from the heart, and the stomach tissue was separated and used for histopathological and biochemical studies. The amount of superoxide dismutase (SOD) in serum and the amount of

malondialdehyde (MDA) in stomach tissue were determined. Results and Discussion: The results in the tested groups show a decrease in the ulcer index and an increase in the percentage of wound inhibition and the protective effect of silver nano particles of the *Artemisia dracunculus* extract. The significant increase in the amount of SOD and the significant decrease in MDA due to the administration of nanoparticles of *Artemisia dracunculus* extract and omeprazole indicate the beneficial effect of the silver nanoparticle of the *Artemisia dracunculus* extract based on its .(antioxidant effects (reduction of oxidative stress